

**COMPREHENSIVE  
CONSERVATION  
PLANS FOR  
NATIONAL WILDLIFE  
REFUGES**

# **PURPOSE**

**Develop management plans  
for refuges dealing with:**

- ✓Wildlife management**
- ✓Habitat management**
- ✓Public use**
- ✓Law enforcement**
- ✓Land use**
- ✓Management on adjacent lands**
- ✓Compatibility of public use with  
refuge mission**

# **COMPREHENSIVE CONSERVATION PLANNING STEPS**

# **1. PREPLANNING**

- ✓ Establish vision and goals**
- ✓ Determine planning area**
- ✓ Assemble available data**
  - Wildlife populations**
  - Vegetative communities**
  - Geology and soils**
- ✓ Identify data gaps**

## **2. INITIATE PUBLIC INVOLVEMENT AND OUTREACH**

- ✓Federal Register notices**
- ✓Letters to interested parties**
- ✓Press releases**
- ✓Public forums**
- ✓Invitations for comments**

# **3. IDENTIFY THE ISSUES**

## **BIOLOGY**

- ✓Threatened and endangered species**
- ✓Migratory birds**
- ✓Fish that live in both fresh and**
- ✓ saltwater and cross state lines**
- ✓Priority species such as those**
- ✓ recognized by Partners In Flight**
- ✓Habitat requirements**

# **LAND MANAGEMENT**

- ✓ **Burning**
- ✓ **Water control**
- ✓ **Forest management**
- ✓ **Agriculture**

## **PUBLIC USE**

- ✓ **Hunting**
- ✓ **Fishing**
- ✓ **Wildlife observation**
- ✓ **Wildlife photography**
- ✓ **Environmental interpretation**
- ✓ **Environmental education**

**NEW POLICIES AFFECTING  
FUTURE REFUGE MANAGEMENT  
AND PUBLIC USES**

**<http://pdm.fws.gov/newfrnotice.html>**



# **LAW ENFORCEMENT**

- ✓ **Safety**
- ✓ **Visitor protection**
- ✓ **Access and trespass**

# **RESEARCH**

- ✓ **Monitoring**
- ✓ **Data collection**
- ✓ **Applied technology**

# **HUMAN RESOURCES**

- ✓ **Staffing needs**
- ✓ **Volunteer program**
- ✓ **Partners**
- ✓ **Friends Groups**
  - ▣ **Partnership for the Sounds**
  - ▣ **Coastal Wildlife Refuge Society**

# **4. DEVELOP AND ANALYZE ALTERNATIVES**

**Based on:**

- ✓Public input**
- ✓Staff recommendations**
- ✓Best available scientific data**
- ✓Subject matter experts**
- ✓Review by public at forums**

# **5. PREPARE DRAFT PLAN**

- ✓Determine compatibility  
(e.g., hunter access vs.  
wildlife photography)**
- ✓Review internally**
- ✓Review by public at public  
forums**

## **6. PREPARE AND ADOPT FINAL PLAN**

- ✓Public comment analysis**
- ✓Public comment response**
- ✓Environmental assessment**
- ✓Internal review**
- ✓Public Notice in Federal Register**

# **7. IMPLEMENT PLAN**

## **MONITOR RESULTS**

## **EVALUATE RESULTS**

- ✓ **Analyze effects of plan**
  - **Monitor wildlife**
  - **Monitor vegetation**
- ✓ **Evaluate public use impacts**
- ✓ **Evaluate law enforcement**

# **8. REVIEW AND REVISE PLAN**

- ✓Analyze results of monitoring**
- ✓Revise plan to improve results  
(e.g., alter frequency of  
burning or timing of water  
management to change  
effects)**
- ✓Revise plan to reflect budget  
constraints**
- ✓Maintain public involvement**

**POCOSIN  
LAKES  
NATIONAL  
WILDLIFE  
REFUGE**



# **ESTABLISHMENT AND ACQUISITION**

**✓In 1963, Pungo Unit established under The Fish and Wildlife Act of 1956 using funds from The Migratory Bird Hunting Stamp Act of 1934 and The Wetlands Acquisition Act of 1964**

**✓In 1990, additional acreage acquired by The Conservation Fund and donated to the Fish and Wildlife Service to bring the total to 113,674 acres**

# **REFUGE PURPOSES**

- ✓ Provide sanctuary for migratory birds (Pungo Unit)**
- ✓ Protect and enhance habitat for threatened and endangered species**
- ✓ Provide a nesting and feeding area for wintering waterfowl on the coastal plain**
- ✓ Provide breeding habitat for wood duck and American black duck**
- ✓ Provide habitat for other migratory and resident game birds and animals**
- ✓ Provide outdoor recreation opportunity for the visiting public**

# **WILDLIFE SPECIES OF MANAGEMENT CONCERN**

**Red-cockaded Woodpecker**

**Bachman's sparrow**

**Henslow's sparrow**

**Brown-headed nuthatch**

**Prothonotary warbler**

**Swainson's warbler**

**Prairie warbler**

**Field warbler**

**Worm-eating warbler**

**Yellow-throated warbler**

**Black-throated green warbler**

**Red wolf**

**Louisiana waterthrush**

**Waterfowl**

**Bobwhite quail**

**American woodcock**

**Short-eared owl**

**Northern parula**

**Stilt sandpiper**

**Buff-breasted sandpiper**

**Solitary sandpiper**

**Common loon**

**Tundra swan**

**Black bear**

# **WILDLIFE HABITAT (113,674 ACRES)**

<b>High pocosin</b>	<b>56,000 acres</b>
<b>Low pocosin</b>	<b>38,600 acres</b>
<b>Open water</b>	<b>7,000 acres</b>
<b>Cypress/tupelo swamp</b>	<b>2,800 acres</b>
<b>Bottomland hardwoods</b>	<b>1,000 acres</b>
<b>White cedar forest</b>	<b>800 acres</b>
<b>Natural shoreline</b>	<b>50 acres</b>

## **ALSO:**

<b>Canals</b>	<b>1,800 acres</b>
<b>Roads</b>	<b>1,700 acres</b>
<b>Firebreaks</b>	<b>1,650 acres</b>
<b>Farmland</b>	<b>1,250 acres</b>
<b>Moist soil units</b>	<b>500 acres</b>
<b>Administrative area</b>	<b>20 acres</b>

# **HABITAT MANAGEMENT**

- ✓ **Prescribed burning**
- ✓ **Water management for waterfowl**
- ✓ **Water management for pocosin restoration**
- ✓ **Mechanical and chemical control of weeds**
- ✓ **Reforestation of wetland trees**
- ✓ **Cooperative farming**

# **NON-CONSUMPTIVE RECREATION**

- ✓ **Environmental Education**
- ✓ **Wildlife observation**
- ✓ **Environmental interpretation**
- ✓ **Wildlife photography**
- ✓ **Hiking/walking**
- ✓ **Boating/canoeing**
- ✓ **Picnicking**

## **CONSUMPTIVE RECREATION**

- ✓ **Fishing and hunting**

# **NORTH CAROLINA NATURAL HERITAGE AREAS**

- ✓Phelps and Pungo lakes**
- ✓Area surrounding Phelps Lake**
- ✓Area surrounding Pungo Lake**
- ✓Refuge area east of Pungo Lake**

# **LAW ENFORCEMENT**

- ✓ **Provided by one law enforcement officer shared between Pocosin Lakes and Mattamuskeet refuges, plus two collateral duty officers at Pocosin Lakes refuge**

## **ISSUES**

- ✓ **Waterfowl blinds**
- ✓ **Baiting wildlife**
- ✓ **Traffic access**
- ✓ **Dumping/littering**
- ✓ **Poaching**
- ✓ **Tree-cutting**



**ALLIGATOR  
RIVER  
NATIONAL  
WILDLIFE  
REFUGE**

# **ESTABLISHMENT AND ACQUISITION**

- ✓ **Original 118,000 acres: Fish and Wildlife Act of 1956**
- ✓ **Remainder of acreage: The Migratory Bird Hunting Stamp Act of 1934 and The Wetlands Acquisition Act of 1964**

# **ACQUISITION HISTORY**

- ✓ In 1984: 118,000 acres donated by Prudential Insurance Company**
- ✓ In 1991: 6,000 acres of original 118,000 acres on west side transferred to Pocosin Lakes refuge**
- ✓ Since 1984: 40,195 acres added to bring current refuge ownership to 152,195 acres**

# **REFUGE PURPOSES AND OBJECTIVES**

- ✓Protect and enhance unique wetland habitats and associated species**
- ✓Maintain optimum populations of black bear**
- ✓Develop, enhance and maintain waterfowl habitat**
- ✓Provide primary consideration to threatened and endangered plants and animals**
- ✓Provide for game and non-game species**

# **WILDLIFE SPECIES OF MANAGEMENT CONCERN**

**Red-cockaded woodpecker**

**Black-throated green warbler**

**Waterfowl**

**Marsh birds**

**Wading birds**

**Migratory birds**

**Fish spawning near refuge**

**American alligator**

**Black bear**

**Red wolf**

**State-listed reptiles**

**and amphibians**

# **WILDLIFE HABITAT (152,195 ACRES TOTAL)**

<b>High and low pocosin</b>	<b>87,355 acres</b>
<b>Pine forest (diseased or flooded)</b>	<b>15,300 acres</b>
<b>Non-alluvial wet hardwoods</b>	<b>12,236 acres</b>
<b>Hardwood/pine swamp</b>	<b>11,380 acres</b>
<b>Marsh</b>	<b>9,904 acres</b>
<b>White cedar forest</b>	<b>8,468 acres</b>
<b>Farmland</b>	<b>5,100 acres</b>
<b>Cypress/gum swamp</b>	<b>1,300 acres</b>
<b>Open water</b>	<b>1,152 acres</b>

# **HABITAT MANAGEMENT**

## **✓Fire management**

- ▣To protect against wildlife**
- ▣To enhance wildlife habitat**

## **✓Forest management**

- ▣Reforestation**
- ▣Habitat improvement**
- ▣White cedar restoration**
- ▣Southern pine beetle control**

## **✓Mechanical and chemical control of weeds**

# **HABITAT MANAGEMENT**

## **✓Water management**

- For waterfowl**

- For natural hydrology**

## **✓Moist soil management**

- For waterfowl**

- For marshbirds and other wildlife**

## **✓Cooperative farming**

- For diversifying wildlife foods**



# **CONSUMPTIVE AND NON-CONSUMPTIVE PUBLIC USES**

- ✓ **Fishing and hunting**
- ✓ **Environmental education**
- ✓ **Environmental Interpretation**
- ✓ **Wildlife Observation**
- ✓ **Wildlife Photography**

## **FACILITIES**

- ✓ **Wildlife drive and trails**
- ✓ **Paddling trails**
- ✓ **Kiosks**

# **SPECIAL DESIGNATIONS**

## **NATURAL HERITAGE AREAS**

**Entire refuge**

## **OUTSTANDING RESOURCE WATERS**

**Alligator River, Milltail Creek,  
Swan Creek, Whipping Creek**

## **ANADROMOUS FISH SPAWNING AREAS**

**Long Shoal River, East Lake, South Lake**

# **LAW ENFORCEMENT**

- ✓ **Conducted as collateral duty by personnel on the refuge (no full-time law enforcement officers)**

## **ISSUES**

- |                                      |                            |
|--------------------------------------|----------------------------|
| ✓ <b>Hunting blinds/stands</b>       | ✓ <b>Dumping/littering</b> |
| ✓ <b>Feeding/baiting wildlife</b>    | ✓ <b>Poaching</b>          |
| ✓ <b>Tree-cutting/wood gathering</b> | ✓ <b>Trespass</b>          |
| ✓ <b>Traffic access</b>              | ✓ <b>Vandalism</b>         |
| ✓ <b>Target practice</b>             |                            |

**MATTAMUSKEET**

**NATIONAL**

**WILDLIFE**

**REFUGE**

# **ESTABLISHMENT AND ACQUISITION**

- ✓ **Established by Executive Order in 1934**
- ✓ **Acquired by authority of The National Industrial Recovery Act**

# **REFUGE PURPOSES**

- ✓To provide refuge and breeding ground for birds and wild animals and to provide hunting and fishing opportunities as appropriate**

# **WILDLIFE SPECIES OF MANAGEMENT CONCERN**

**Tundra swan**

**Canada goose**

**Snow goose**

**American black duck**

**Northern pintail**

**Canvasback**

**Wood duck**

**Brown-headed nuthatch**

**Black-throated green warbler**

**White-tailed deer**

**Carolina pygmy rattler**

**King rail**

**Yellow rail**

**Solitary sandpiper**

**Semi-palm. sandpiper**

**Short-billed dowitcher**

**Peregrine Falcon**

**Bald eagle**

**Osprey**

**Red wolf**

**Herring**

# **WILDLIFE HABITAT (50,180 ACRES TOTAL)**

<b>Open water</b>	<b>40,000 acres</b>
<b>Estuarine fringe loblolly pine forest</b>	<b>3,000 acres</b>
<b>Impoundments</b>	<b>2,650 acres</b>
<b>Natural lake shoreline</b>	<b>2,430 acres</b>
<b>Cypress/tupelo swamp</b>	<b>1,500 acres</b>
<b>Farmland</b>	<b>400 acres</b>
<b>Non-riverine swamp forest</b>	<b>150 acres</b>
<b>Administrative areas</b>	<b>50 acres</b>



# **HABITAT MANAGEMENT**

- ✓ **Prescribed burning of marsh and pine forests**
- ✓ **Water management for waterfowl, shorebirds, and other migratory birds and fish**
- ✓ **Impoundment management to provide natural foods and habitats for waterfowl and other migratory birds**
- ✓ **Mechanical and chemical control of weeds**
- ✓ **Farming for supplemental foods to benefit waterfowl and other wildlife**

# **NON-CONSUMPTIVE RECREATION**

- ✓ **Environmental education**
- ✓ **Wildlife observation**
- ✓ **Environmental interpretation**
- ✓ **Wildlife photography**
- ✓ **Hiking/walking**
- ✓ **Canoeing/boating**
- ✓ **Picnicking**

# **CONSUMPTIVE RECREATION**

- ✓ **Fishing/Crabbing**
- ✓ **Hunting (Waterfowl, deer)**

# **NATURAL HERITAGE AREAS**

**Entire refuge land and lake area**

## **REGISTERED HERITAGE AREA**

**Entire refuge land and lake area**

## **RESEARCH NATURAL AREA**

## **NATIONAL NATURAL LANDMARK**

**Sayler's Ridge**

# **ANADROMOUS FISH SPAWNING AREAS**

**Entire lake**

## **PROPOSED WILDERNESS**

**Heron Bay Island**

**Great Island**

**Head of Lake Island**

## **NATIONAL REGISTER OF HISTORIC PLACES**

**Mattamuskeet Lodge**

# **LAW ENFORCEMENT**

- ✓ **Law enforcement provided by one full-time refuge officer shared with five other refuges**
- ✓ **Two collateral refuge officers**
- ✓ **Assistance provided by NCWRC conservation officers and other law enforcement agencies**
- ✓ **Information and regulatory leaflets**
- ✓ **Regulatory signage posted**

# **LAW ENFORCEMENT ISSUES**

- ✓ **Littering**
- ✓ **Poaching**
- ✓ **Trespass**
- ✓ **Vandalism**
- ✓ **Fishing/boating violations**
- ✓ **Drug/alcohol violations**
- ✓ **Hunting violations**
- ✓ **Reptile collecting**
- ✓ **Drainage ditches**
- ✓ **Boundary issues**
- ✓ **Wildlife disturbance**

**SWANQUARTER  
NATIONAL  
WILDLIFE  
REFUGE**

# **ESTABLISHMENT AND ACQUISITION**

- ✓ **Established in 1932 by The Migratory Bird Conservation Act of 1929, purchased using Migratory Bird and Emergency Conservation Work Funds**
- ✓ **In 1980: 142 acres donated by The Nature Conservancy**
- ✓ **In 1992: 768 acres purchase from The Nature Conservancy**



## **HUNTING CLOSURE AUTHORITY**

- ✓ **In 1935: all refuge lands and 27,082 acres of adjacent waters were closed to hunting, taking and molesting of game birds (1977 amendment allowed hunting to occur in designated areas)**

## **WILDERNESS DESIGNATION**

- ✓ **Congress designated 8,785 acres of the refuge as wilderness in 1976**

# **REFUGE PURPOSES**

- ✓ **To provide a sanctuary for migratory birds**
- ✓ **To develop, enhance, advance, manage, conserve and protect fish and wildlife resources**

# **WILDLIFE SPECIES OF MANAGEMENT CONCERN**

**American black duck**

**Lesser scaup**

**Canvasback**

**Redhead**

**Surf scoter**

**Brown-headed nuthatch**

**Black-throated green warbler**

**Seaside sparrow**

**Black bear**

**Red wolf**

**Sharp-tailed sparrow**

**Black rail**

**Yellow rail**

**Clapper rail**

**Foster's tern**

**Peregrine falcon**

**Bald eagle**

**Osprey**

**Carolina pygmy rattler**

**American alligator**

# **WILDLIFE HABITAT ( 16,411 ACRES TOTAL)**

<b>Brackish marsh</b>	<b>12,300 acres</b>
<b>Estuarine fringe loblolly pine forest</b>	<b>2,500 acres</b>
<b>Low pocosin</b>	<b>700 acres</b>
<b>Cypress/tupelo swamp</b>	<b>600 acres</b>
<b>Pine savanna</b>	<b>250 acres</b>
<b>Tidal cypress/gum swamp</b>	<b>50 acres</b>
<b>Administrative areas</b>	<b>11 acres</b>

# **HABITAT MANAGEMENT**

- ✓ **Prescribed burning of marshes and pine forests**
- ✓ **Mechanical and chemical control of weeds**

# **NON-CONSUMPTIVE RECREATION**

- ✓ **Environmental education**
- ✓ **Wildlife observation**
- ✓ **Environmental interpretation**
- ✓ **Wildlife photography**
- ✓ **Hiking/walking**
- ✓ **Canoeing**

# **CONSUMPTIVE RECREATION**

- ✓ **Fishing/crabbing**
- ✓ **Hunting (waterfowl, in designated areas)**

# **NATURAL HERITAGE AREAS**

**Entire refuge land area and part of sound**

## **REGISTERED HERITAGE AREA**

**Most of refuge area**

## **ANADROMOUS FISH SPAWNING AREAS**

**Shoreline of sound**

## **OUTSTANDING RESOURCE WATERS**

**All sound waters off refuge shoreline**

# **LAW ENFORCEMENT**

- ✓ **Law enforcement provided by one full-time refuge officer shared with five other refuges**
- ✓ **Two collateral refuge officers**
- ✓ **Assistance provided by NCWRC conservation officers and other law enforcement agencies**
- ✓ **Information and regulatory leaflets**
- ✓ **Regulatory signage posted**



# **LAW ENFORCEMENT ISSUES**

- ✓ **Hunting violations**
- ✓ **Reptile collecting**
- ✓ **Drug/alcohol use**
- ✓ **Wildlife disturbance**
- ✓ **Loss of aquatic vegetation**
- ✓ **Littering**
- ✓ **Poaching**
- ✓ **Trespass**
- ✓ **Camping**

**SO . . . What's next?**

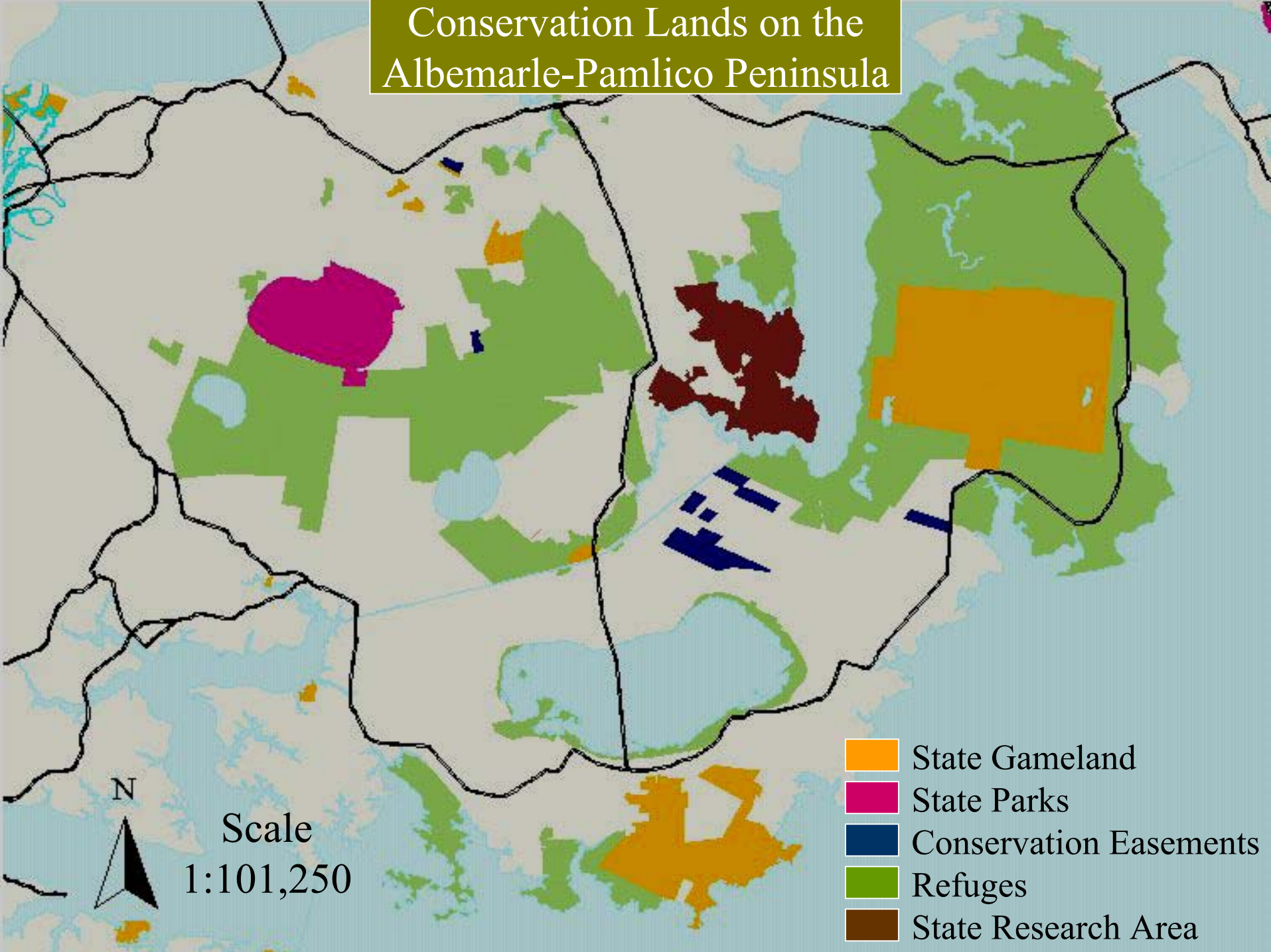
 **HELP!** 

***We need your input, concerns,  
issues, advice and expertise for  
consideration in planning the  
future of the refuges***

# **OPTIONS FOR LAND CONSERVATION BEYOND REFUGE BOUNDARIES**

- ✓Landowner conservation–Landowners managing land for wildlife conservation (personal expertise, advice of consultants or state or federal agency)**
- ✓Landowner agreements– Willing landowners allow Fish and Wildlife Service to assist with certain management activities**
- ✓Landowner Easements– Willing landowners sell certain rights, such as the right to clear, farm, or construct buildings, to Fish and Wildlife Service retaining rights to hunt, fish, trap, and lease the land for hunting**
- ✓Land Purchase– Willing landowners sell land to Fish and Wildlife Service for the appraised value**

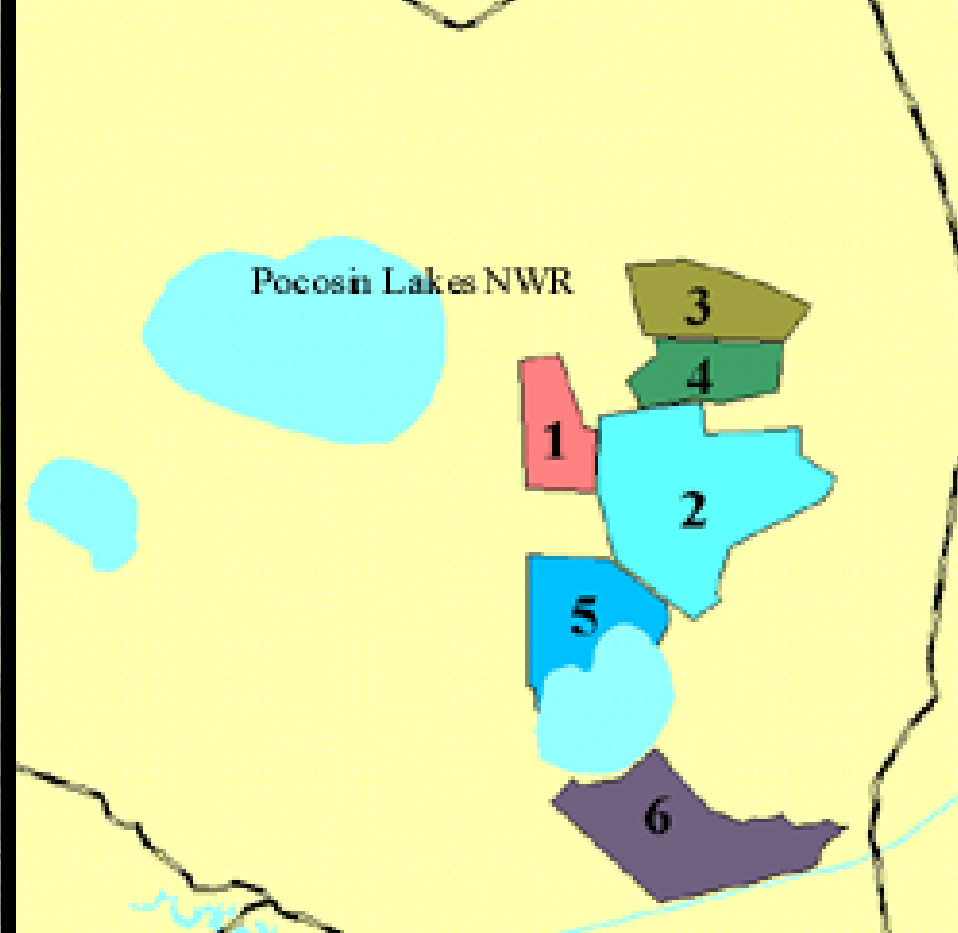
# Conservation Lands on the Albemarle-Pamlico Peninsula











Parcel	ACREAGE
1	2,688.88
2	10,314.53
3	3,676.48
4	2,777.75
5	6,284.81
6	7,077.59





<b>7</b>	<b>5,139.20</b>	<b>15</b>	<b>3,111.14</b>
<b>8</b>	<b>7,302.45</b>	<b>16</b>	<b>2,247.42</b>
<b>9</b>	<b>4,423.77</b>	<b>17</b>	<b>4,710.03</b>
<b>10</b>	<b>4,540.97</b>	<b>18</b>	<b>6,679.23</b>
<b>11</b>	<b>9,803.60</b>	<b>19</b>	<b>1,688.96</b>
<b>12</b>	<b>2,199.50</b>	<b>20</b>	<b>3,477.55</b>
<b>13</b>	<b>2,823.06</b>	<b>21</b>	<b>3,144.47</b>
<b>14</b>	<b>1,230.65</b>		





<b>22</b>	<b>2,798.75</b>
<b>23</b>	<b>1,545.10</b>

**NEW POLICIES AFFECTING  
FUTURE REFUGE MANAGEMENT  
AND PUBLIC USES**

**<http://pdm.fws.gov/newfrnotice.html>**